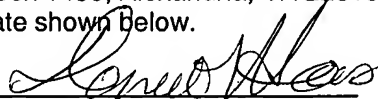




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Donald F. Haas
Date: June 10, 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the accompanying application of)	
)	
ERIC J. M. DE BOER,)	
MARIJKE DE BOER-WILDSCHUT,)	
HARRY VAN DER HEIJDEN, and)	
ARIE VAN ZON)	
)	
Serial No. 10/668,592)	Group Art Unit: 1713
)	
Filed September 23, 2003)	Examiner: Robert D. Harlan
)	
CATALYST SYSTEMS FOR ETHYLENE)	June 10, 2005
OLIGOMERISATION TO LINEAR ALPHA)	
OLEFINS)	
)	

COMMISSIONER FOR PATENTS
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

RESPONSE

The following remarks are submitted in response to the office action of March 23, 2005. The Examiner has rejected all of the claims in this case, claims 1-21, as being obvious over Devore et al., U.S. Patent No. 6,825,297. The Examiner states that Devore teaches a catalyst system which has a bisarylimino pyridine iron catalyst and a cocatalyst which could be a mixture of alumoxanes and Lewis acid compounds. The Examiner states that even though Devore does not mention the specifically claimed second cocatalyst of the present invention, zinc dialkyl, for

example, that such a compound is a Lewis acid that falls within the generic teaching of Devore. This rejection is respectfully traversed.

The present invention as described in claim 1 is a catalyst system comprising one or more bisarylimino pyridine iron or cobalt catalysts, a first cocatalyst compound which is an aluminum compound, and a second cocatalyst which is a zinc compound as described in the formula in claim 1.

The Applicants assert that the Examiner has incorrectly characterized the disclosure of Devore. Devore describes at column 5, lines 20-50, a catalyst compound which contains a catalyst which can be a bisarylimino pyridine iron catalyst. The catalyst system may also contain an activating cocatalyst. At column 5, lines 36-38, it is stated that the activating cocatalyst can be "mixtures of such (polymeric or oligomeric) alumoxanes with one or more C₁₋₂₀ hydrocarbyl substituted Group 13 metal Lewis acid compounds, and mixtures of such alumoxanes or alumoxane/Lewis acid mixtures with one or more aliphatic or aromatic ethers." No zinc compound is mentioned in this description of the cocatalyst nor is any zinc compound mentioned at all anywhere in the patent. Zinc is a Group 12 element. Group 13 elements include boron and aluminum which are specifically mentioned lower down at column 5, lines 40-50.

Example 8 of Devore is not relevant to the disclosure of the present invention because there is no aluminum compound used in the example. Magnesium methyl bromide is mentioned but that compound is a Group 2 metal compound and such compounds are not part of the present invention nor are they disclosed anywhere in the present application. Furthermore, no Group 13 metal Lewis acid compound was used in Example 8.

Example 9 of Devore does incorporate an aluminum compound but it is triethyl aluminum which is a Group 13 metal Lewis acid. While the claims of the present application indicate that an aluminum alkyl can be the first cocatalyst compound, they specifically require that there be a second cocatalyst compound and that it be a zinc compound. This example simply does not disclose or suggest anything relevant to the present invention.

Finally, Example 19 of Devore does not include the use of any Lewis acid at all. The only catalyst components are the bisarylimino pyridine iron catalyst and the methyl alumoxane cocatalyst. Thus, this example has no relevance to the present invention.

The Applicants assert that the Section 103 rejection has been overcome by the above argument. The reference simply does not disclose the zinc cocatalyst compounds of the present invention nor are they included in any generic description provided in the reference since the generic description of Lewis acids in the reference is limited to Group 13 metal Lewis acid

compounds. For these reasons, the Applicants assert that the rejection has been overcome and respectfully request an early notice of allowance.

Respectfully submitted,

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